

EU-Moldova DCFTA: assessing the impact of the liberalization of trade in services on the Moldovan economy

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List of acronyms and abbreviations

AA – Association Agreement

CGE – Computable General Equilibrium (model)

CIS – Commonwealth of Independent States

DCFTA – Deep and Comprehensive Free Trade Area

EU – European Union

FDI – Foreign Direct Investment

GDP – Gross Domestic Product

GVA – Gross Value Added

MFN – Most Favored Nation

OECD – Organization for Economic Cooperation and Development

RCA – Revealed Competitive Advantages

SAM -Social Accounting Matrix

STRI – Service Trade Restrictions Index (methodology developed and used by OECD for evaluation of the level of restrictions on the trade in services)

WTO – World Trade Organization

Non-technical executive summary

Services play a very important role in the Moldovan economy by contributing to the value added, employment and trade. Moldova is largely a services-based economy. Nowadays, the commercial services generate 50 percent of the gross value-added, twice above their share in the mid-1990s. Services sectors employ more than 30 percent of the Moldovan labor force, compared to 20 percent in mid-1990s. Equally important, services contribute around 30 percent to total export revenues of the country; in mid-1990s the figure was around 17 percent. As the Revealed Competitive Advantages indexes suggest, Moldovan services are more competitive than goods.

While often neglected or even feared, the imports of services are also very important economically. Over the recent two decades the services represented around one fifth of the Moldovan imports. Services hold high shares in intermediary consumption across all sectors, therefore one should expect that fewer restrictions on import of services should benefit Moldovan firms using services as technological inputs. A key statistical fact is that transport, telecommunications and financial services demonstrate the highest levels of the services used as intermediate consumption, typically exceeding 40 percent, of their total intermediary consumption.

The policy measures applied by Moldova on the imports of services are, in general, more restrictive compared to the EU. Using the OECD Service Trade Restrictiveness Index methodology, we have assessed that Moldova imposes less restrictive measures for trade in accounting, audit and legal services than most of the EU countries. The level of restrictiveness is comparable to the EU averages for the customs brokerage services, freight forwarding services and road cargo freight services. For other services, including rail transport, telecommunications and courier and postal services, Moldovan level of trade restrictiveness is significantly higher.

The EU-Moldova Association Agreement includes a number of commitments for the liberalization of the trade in services. If duly implemented, Moldovan commitments will significantly improve the conditions for import of services in Moldova. The EU, as a whole and as individual member-countries, secured a large number of derogations and reservations. For the sake of objectivity, though, one should not omit the fact that the current EU's level of protection is quite low for the services which Moldova is the most competitive (road transport, computer services, telecommunications). The key factors undermining Moldovan services in the EU market apparently have to do more with intrinsic weaknesses of the Moldovan firms rather than with EU trade policy.

In this paper, we use a General Computable Equilibrium model to estimate the systemic impact of the liberalization of the trade in services. We find non-negligible positive impact of the liberalization on the Moldovan side, including higher GDP, labor income, activity level and trade level, as well as increased efficiency, primarily in the services sectors themselves. We do not find significant impact of the liberalization of imports of Moldovan services into the EU, because of the limited magnitude of the additional concessions compared to those already provided by EU members under the MFN regime. We find that, the reduction of trade margins in the distribution sector, following, for instance, higher number of players (including domestic) and dismantlement of the monopolistic structures, has a much higher economic impact than the freer market entry as such and the increased international personnel mobility in other services sectors. However, we acknowledge that analytical framework and data limitations may have resulted in underestimation of the positive economic results. First off all, we did not cover the services for final consumption (air travel, tourism, health, education etc.). Secondly, we did not consider the likely fact that new services may arise in the future which are not covered by the Association Agreement. Thirdly, we have not have enough data and a simple and implementable analytical framework to estimate the positive and systemic impact of reducing the rent-seeking behavior associated with highly regulated services sectors in the Moldovan economy. Finally, while it is clear that lower restrictions involve higher export prices, the exact functional dependency is not clear.

Introduction

The year 2014 has been a historical landmark for the Republic of Moldova, as the country has signed with the European Union the Association Agreement. The Agreement enacts a Deep and Comprehensive Free Trade Area (DCFTA). The free trade agreement is 'deep and comprehensive' since it encompasses a far-reaching regulatory approximation and market access liberalization, in line with the rights and obligations arising out of WTO membership of Moldova and EU.

As part of the DCFTA, the parties committed to remove import duties for most goods traded and to provide for a broad mutual access to trade in services. The impact of the liberalization of the trade in goods between Moldova and EU has been the subject of many researches (ECORYS 2014, EG 2012, World Bank 2016 (2)). Most of them conclude that the impact is going to be relatively small for the Moldovan economy considering two facts: 1) Moldova benefited of preferential access to the EU market for most of its goods before the DCFTA; and 2) Moldova already has a liberal trade policy. World Bank (2016 (2)) also includes a preliminary assessment of the impact of the services liberalization.

The key goal of this paper is to shed more light on the expected impact of the liberalization of the trade in services between Moldova and EU within a Computable General Equilibrium framework. The relevance of this framework is obvious if one considers the strength of the downstream and upstream economy-wide linkages that services possess. The model is a one-country model, for the simple reason of the sheer difference in the economic sizes of the EU and Moldova making the economic impact on the EU negligible by any measure. At the same time, the model is dynamic, which allows for satisfactorily taking into account the changes in productive factors endowment and in factors productivity. This is an important feature, because services by their nature are enhancing productivity of the labor and capital. We concentrate on those services that are important as intermediary inputs and not on the services for final consumption (personal travel and tourism, education, health and others alike). Also, we did not include important services sectors, such as environment-related services or trade in oil products, which fall under the Association Agreement, but are not currently covered by the OECD methodology (see below).

The paper is structured in five chapters. Chapter one briefly discusses the relevant literature on the economic role of the trade in services and of trade liberalization. The second one includes key data reflecting the economic role of services for the Moldovan economy. Here we also present our results on the measurement of the international competitiveness of the services Moldova trades. Using a recently developed OECD methodology measuring the Services Trade Restrictiveness Index (Grosso et al 2015), in the third chapter we assess the degrees of services trade restriction of Moldova and EU before and after the implementation of the DCFTA. This methodology approaches in a simple, yet structured way the complexity of barriers hindering international trade in services. We use these results in the fourth chapter to conduct an economic assessment of the changes in the trade regimes induced by the DCFTA within a general computable equilibrium framework. The final chapter concludes and makes a number of policy proposals.

1. Overview of the literature on the economic role of trade in services

Services sector has an important economic role that manifests in two dimensions. Firstly, the services sector is prominent for its role in employment, value added generation and international trade (Francois and Hoekman, 2009). In the EU and CIS countries, the services sector accounts for around 40 percent of the employment and more than 50 of value-added (Table 1). In these countries, services exports also hold substantial shares of the GDP, in general around 10 percent. Globally, services represent more than 20 percent of the trade. This number, however, does not account for the fact that a significant amount of services is traded as embodied in goods (Christen et al, 2012). Properly accounting for the directly and indirectly traded services would give them a share of more than 40 percent in the value of the global trade.

Table 1. Indicators of the economic role of services in some countries and regions, 2014

	Share of services in gross value-added, %	Share of services in total employment, %	Services exports share in GDP, %
EU28	73.4	65.7	11.7
CIS	50.0	44.5	9.2
Romania	55.5	36.6	9.9
Moldova	60.6	46.7	13.7
Ukraine	58.7	50.2	11.0
Georgia	57.2	32.2	17.9

Note: in this table the services include both commercial and public services;

Source: WTO, 2015.

The second dimension of the economic role of services encompasses their role in facilitation of economic transactions. While services are extensively used for the purposes of final households and governmental consumptions, their role is critical from the perspective of reducing transaction costs across economy and society as they facilitate these transactions through time (financial services, insurance) and space (telecommunications, transport) (Melvin, 1989, quoted in Christen et al, 2012). From this perspective, the competitiveness of the downstream manufacturing firms using commercial services as inputs in their technological processes crucially depends on the unrestricted access to services. By augmenting the productivity of the labor and the capital, the services boost competitiveness of the national products (Christen et al, 2012). A freer environment for competition in services sectors comes with benefits not only for the manufacturing firms, but also for the incumbent services providers, considering the learning effects and that services provide inputs for the generation of other services.

Trade in services links to the circulation of capital. Because services are not storable, the international trade in services, contrary to that of goods, often requires a commercial presence. This presence can be achieved through making Foreign Direct Investments in the host economy and this corresponds to the WTO mode 3 of supply of services (WTO 2016). Barriers of any sort that hinder the FDI will affect negatively the trade in services. A number of papers have found a statistically significant positive effect of the FDI brought by services liberalization on the productivity of the firms in the downstream economic sectors in the Czech Republic, Chile and Ukraine (Francois and Hoekman, 2009), India (Bas, 2013) and Tunisia (Konan and Assche, 2006).

However, trade in services takes place also in other ways than just through commercial representations. The mode 1 involves cross-border supply not requiring physical movement of the customer or provider to the other's location. Most of the call centers in Moldova function this way or in combination with the mode 3. The mode 2 refers to the models of trade involving travel of customers for the consumption of services abroad (tourism, provision of medical services to foreign residents). Again, this mode is highly relevant for the Moldovan economy. Mode 4 trade applies when service providers or its representatives (personnel) travel to the customer's location to provide the services.

Professional consultancy services are traded this way. This WTO classification of services has been an outcome of the attempts to account for various policy barriers that affect trade, barriers that may restrict establishment of a branch or commercial representation, travel of the personnel, capital repatriation and so on. The diverse nature and complexity of these barriers is the key reason why comprehensive, yet simple, methodologies are required for evaluation of the restrictiveness of the international trade in services.

2. Economy of the Moldovan services

Services play an increasingly dominant role in the Moldovan economy. Despite the stereotype persisting in the domestic and international media of Moldova being an agricultural country, in fact, over the recent two decades the country has moved away from an agriculture-based economy (Figure 1 and Figure 2). Nowadays, commercial services¹ and constructions² generate 50 percent of the gross value-added (GVA), twice above their share in the mid-1990s. For the sake of comparison, the agricultural and industrial sectors contribute 15-17 percent each to the GVA; compare this to their shares of 30 percent each in mid-1990s. As of 2015, services employed more than 31 percent of the Moldovan labor force (20 percent in 1995), whereas agriculture - 32 percent (compared to 55 percent in 1995) and industry – 12 percent (16 percent in 1995). There is a clear structural transition going on in the Moldovan economy. We expect the share of services in GVA and in employment to continue expanding over the next decade, mainly at the expense of the agricultural sector.

Labor in the services sector is more productive than on average per economy. Since the restart of the economic growth in 2000, the labor productivity in the services has been significantly above the average per economy and virtually matched the productivity in the industrial sector. And this is despite a regression of the services' labor productivity to the average associated with a labor shedding from agriculture. As of 2015, the labor productivity in the services sector was more than 30 percent above the national average (Figure 3).

Services are also important for the Moldova's foreign trade. In the period covered by statistical data, the trade in goods and services has grown as absolute value (Figure 4), even though as GDP ratio the progress has not been steady. Starting from around 130 percent of GDP in 1995, the trade volume reached an all-time high of 144 percent in 2007. Afterwards, the trade-to-GDP ratio declined, to reach 118 percent in 2015. Meanwhile, the share of exports of services in total exports expanded from 16 percent in mid-1990s to a record level of 33.6 percent in 2008. This is a clear evidence of the growing role of the services in Moldovan trade. After the financial crisis hit, the share of exports slightly receded and averaged 29 percent in 2010-2015. The imports of services followed a different trend, as their GDP share went from 17 percent in total imports in 1995 up to 22.5 in 1999 and steadily declined afterwards, to reach 17 percent nowadays.

The trade balance reflects a prominent difference between goods and services. As inferred from the Figure 4, the balance of trade in goods deteriorated remarkably in the recent two decades. Opposite to this, the balance of trade in services has been in a steady equilibrium. With all potential caveats in mind, the divergent trade balances for services and goods can be interpreted as exports of services improving faster their competitiveness as compared to the exports of goods.

There has been also a significant geographical diversification of trade in services. Official Moldovan data do not offer enough details regarding the services trade at the level of all partner countries. Only five countries (Belarus, Germany, Romania, Russia and Ukraine) and two regions (the CIS and the Rest of the World) are historically covered

¹ According to international methodology of the Balance of Payments, commercial services category defines as being equal to total services minus government services not included elsewhere.

² For the reasons of consistency with the Balance of Payments methodology, constructions are included in the wider sector of services. However, in many national statistical systems, including Moldova, constructions are often treated as a distinct economic sector.

in the Moldovan balance of payments³. However, even these data provide evidence that over time Moldova has got less dependent on the CIS countries for both exports and imports of services. In fact, exports of services seem to have diversified faster than exports of goods. In 1997, the CIS, in general, and Russia, in particular, accounted for 53 and, respectively, 31 percent of total Moldovan exports of services. In 2015, their shares were only 22 and 14 percent, accordingly. For the imports, the shares of the CIS and Russia also declined: 48 and 28 percent accordingly in 1997 versus 23 and 18 percent accordingly in 2015.

A number of significant structural changes accompanied the expansion of exports of services. The IT services have been the “rising star”, currently holding a share of 8.5 percent of total exports of services (**Error! No bookmark name given.**). While detailed evidence is lacking, UK and US seem to be the main destinations of the IT services. The transport services dominate the aggregate with 37.2 percent of total exports. The geography limits Moldovan trade in transport services to the nearby region. Around 35 percent of the total transport services target CIS countries, but the lion’s share goes to Central European and Balkan countries. Travel services exports account for 25.3 of total exports, with in-bound business travel and leisure tourism being the main types of service provided. Around one quarter of the customers come from CIS, whereas 55 percent – from the EU. The telecommunications services represent 12.8 percent of the total exports. Since the year 2010, the sector has lost a significant share of the total volume of exports. The CIS countries attract around 10 percent of the value of telecommunication services exported and thus play a relatively minor role in the total trade in services.

However, the official data, and the structural indicators above, do not cover the entire volume of the trade in services. The Moldovan balance of payments does not include a very important type of services – the processing of raw materials provided from abroad by the owners of the materials. These services are provided as part of outward processing agreements that Moldovan manufacturers of clothes, footwear, electric components and cables entered with European counterparts. According to the International Trade Center data, in the year 2015, the total value of exports of processing services was roughly 145 million USD (ITC 2016), which is comparable to the volume of telecommunication and IT services combined. Another potential statistical flaw may come from the re-exports of goods (34 percent of the total exports of goods in 2015, according to NBS 2016). According to a recent study, a significant proportion of re-exports is in fact associated with provision of services rather than with production of goods (World Bank 2016 (1)).

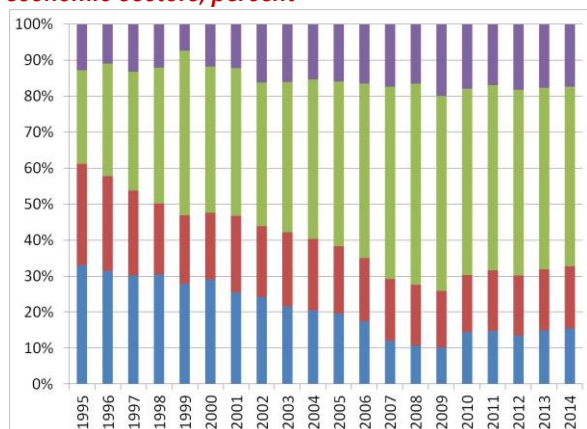
Moldova displays comparative advantages for some services exports. We have used the Revealed Comparative Advantages (RCA) approach to identify the services for which Moldova is well positioned to compete internationally. The computed RCA indexes are included in Table 2, with indexes above unity showing that on the global scale Moldova reveals comparative advantages in provision of that service. A surprising finding is that Moldova seems better positioned for the provision of services (average RCA index 1.57 for the period 2011-2015) as compared to the goods it exports (RCA index 0.98). The manufacturing services (processing of physical inputs owned by others) display by far the highest levels of RCA.

Structurally, services imports very much resemble the exports. For the services imports, one can find that transport services dominate with 36.3 percent of total volume of imports. Most of these services are imported from the statistical category „rest of the world” as opposed to from „CIS”. Travel services follow closely behind (34.5 percent), with two-thirds going to the personal travel services. The business travel services have seen their share growing from 26% in 2006 to 34% in 2015, a sign of growing integration of Moldova in the international economy. Other business services currently hold shares of almost 10 percent for imports (as well as for exports).

³ The reasons for maintaining a country group covering only 30 percent of the trade in general are not clear.

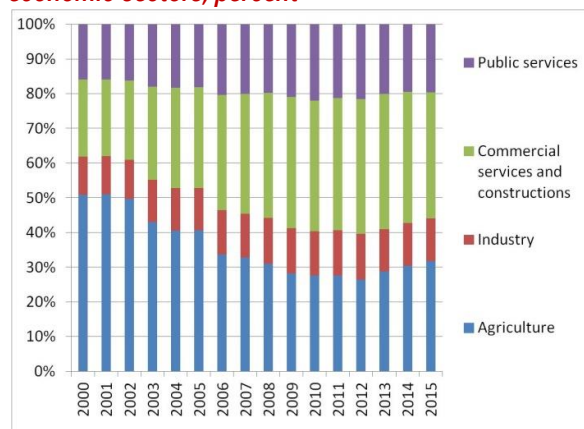
While often neglected or even feared, the imports of services are economically very important. For the reasons exposed in the first chapter – services hold high shares of the intermediary consumption in the technological processes across all sectors – the unrestricted access to imported services is very important for Moldovan firms. Commercial services that reduce costs of transactions – transport and logistics, telecommunications, financial services - exhibit the highest levels of intermediately consumed services , typically exceeding the 40 percent threshold. This is a key aspect underlining the idea that the economic role of services in Moldova may in fact be much more important than prima facie statistical data would suggest.

Figure 1. Structure of the Gross Value Added by major economic sectors, percent



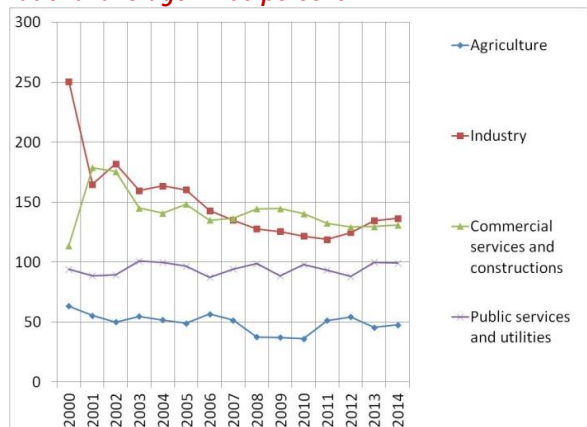
Source: EG based on NBS;

Figure 2. Structure of the employed population by major economic sectors, percent



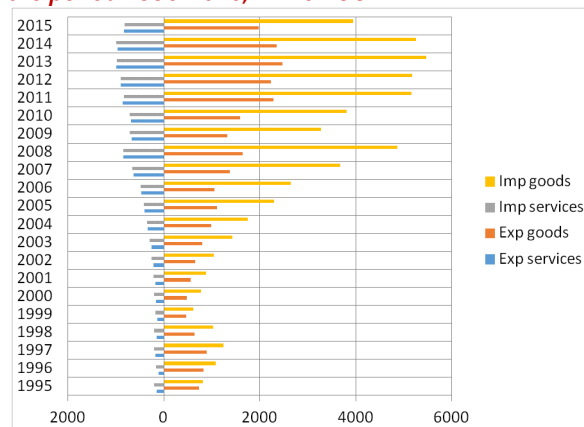
Source: EG based on NBS;

Figure 3. Labor productivity by major economic sectors, national average = 100 percent



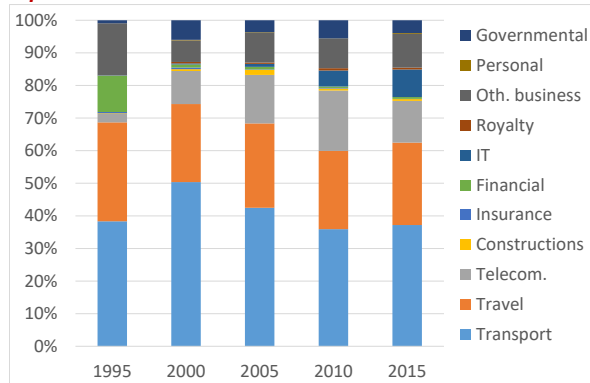
Source: EG based on NBS;

Figure 4. Volume of goods and services trade flows for the period 1995-2015, million USD



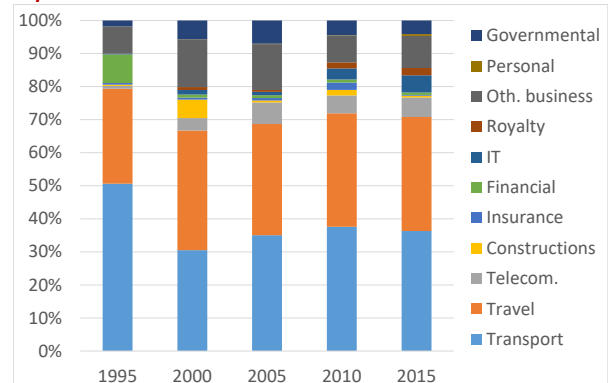
Source: EG based on NBS;

Figure 5. Structure of services export by groups of services in selected years, percent of total services export



Source: Expert-Grup calculations based on the NBM's Balance of Payments of the Republic of Moldova.

Figure 6. Structure of services import by groups of services in selected years, percent of total services import



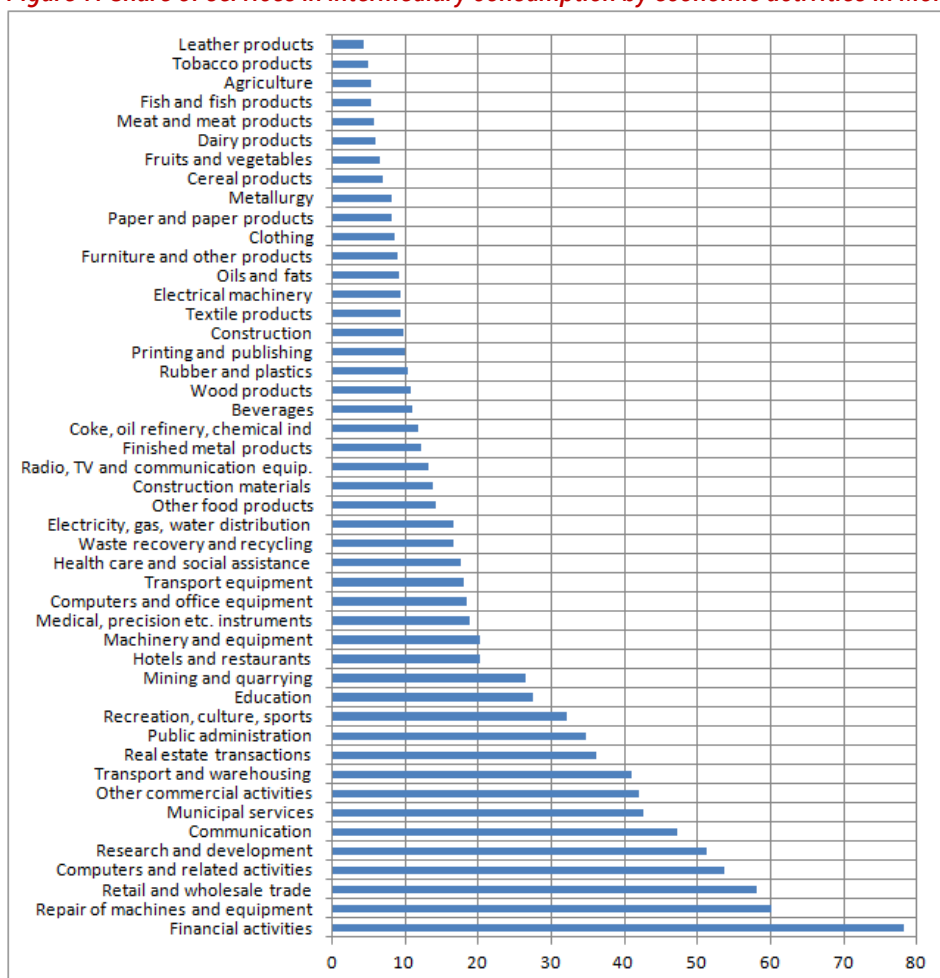
Source: Expert-Grup calculations based on the NBM's Balance of Payments of the Republic of Moldova.

Table 2. Revealed Competitive Advantage indexes for Moldovan services exports in the period 2011-2015

	2011	2012	2013	2014	2015
Total services	1.78	1.82	1.77	1.70	1.57
Manufacturing services on physical inputs owned by others	13.25	11.79	13.56	14.34	14.66
Maintenance and repair services n.i.e.	0.17	0.30	0.13	0.20	0.27
Transport	3.43	3.55	3.53	3.13	2.92
Travel	1.40	1.48	1.45	1.38	1.36
Construction	0.48	0.30	0.43	0.39	0.42
Insurance and pension services	0.11	0.06	0.05	0.03	0.03
Financial services	0.12	0.12	0.13	0.13	0.11
Charges for the use of intellectual property n.i.e.	0.17	0.14	0.17	0.18	0.12
Telecommunications, computer, and information services	4.00	3.98	3.50	3.03	2.76
Other business services	0.82	0.81	0.76	0.70	0.66
Personal, cultural, and recreational services	0.08	0.28	0.30	0.34	0.42
Memo: RCA for total exports of goods	0.98	0.98	0.98	0.98	0.98

Source: author's calculations based on ITC Trademap, http://www.trademap.org/Service_SelCountry_TS.aspx

Figure 7. Share of services in intermediary consumption by economic activities in Moldova, percent of total, as of 2014



Source: author's calculations based on the NBS, 2016.

3. Discussion of the level of liberalization of the trade in services with DCFTA and without

How to assess the restrictiveness of the services trade policy measures?

Applying a CGE model requires comparing ex-ante and ex-post trade conditions. The CGE models are useful for the policy impact and shock impact analyses only to the extent to which the changes in underlying conditions are reasonably well assessed. In case of the EU-Moldova services trade liberalization, what one has to do is to evaluate the level of trade restrictiveness without and with liberalization. We have a credible prior in mind that the impact on the EU economy in any case is going to be minimal due to economic sizes difference. Therefore, what we have to evaluate is: a) the level of restrictiveness imposed by Moldova on imports of services from EU before and after the liberalization; and b) the level of restrictiveness imposed by the EU on the imports of the services from Moldova before and after the liberalization.

However, policy measures restricting trade in services are more complex than in case of trade in goods. Complexity of the policy measures regulating trade in services poses significant challenges for the modeling. In case of the trade in goods, the tariff and non-tariff barriers are easily quantifiable to be included in the equations of the CGE

model. In case of services, policy measures are much more nuanced; they are often centered on limitations of cross-border movements of personnel, limitations on establishing commercial presence, compulsory administrative registrations and permits, recognition of professional skills, declaration of state monopolies (sometimes called 'natural monopolies', as is the case of rail road transport services in Moldova), attribution of exclusive rights, and other measures alike. The universe of possible barriers against trade in services is so vast, that their assessment requires both simple and, at the same time, sound methodologies that would allow to see "the wood for the trees" (Grosso et al, 2015).

OECD has relatively recently launched a simple but robust methodology which is appropriate for our modeling purposes. In 2015, the OECD has launched the Services Trade Restrictiveness Index (see details in Grosso et al, 2015). The methodology has been defined to encompass 18 services sectors, for which general and sector-specific trade restrictions are identified and assessed using a binary type of scoring. The methodology has been designed to account for complexity of the MFN trade restrictions. The non-binary measures are broken down in multiple thresholds whenever the case applies. The methodology accounts well for the hierarchical structure and interdependency of measures (for instance, if FDI entry is completely forbidden, other restrictions are less relevant). For all services sectors, the evaluated policy measures are grouped under the five policy areas:

1. Restrictions on foreign entry;
2. Restrictions on the movement of personnel;
3. Other discriminatory measures;
4. Barriers to competition;
5. Regulatory transparency.

The STRI is based on a simple scoring and weighting system. According to Grosso et al (2015), the individual policy measures are assigned a score of 0 (no restrictive) or 1 (restrictive). Under each of the five policy areas all measures receive the same weight. The five policy areas are weighted according to relative importance of the policy area for the given sector. These shares are different, because some services (for instance, legal services) may be more sensitive to restrictions on movements of people, others (rail road transport) are more sensitive to restrictions on foreign entry, while others (telecommunications) – to measures limiting competition. Experts contributing to Grosso et al (2015) have distributed 100 points among the five policy areas according to how they see their relative importance for each sector. The weights applied use the results of this expert judgment exercise. Thus, the same policy area takes different weights in different sectors, but they are the same for all countries.

We have applied the OECD methodology for priority sectors only. The OECD methodology is complex and requires analysis of a vast number of legislative acts. For the sake of feasibility, we have applied it only for the most important services traded between Moldova and EU reflected in Figure 5 and Figure 6. We have assessed the trade restrictiveness on both EU and Moldovan side for the services provided below for the trade regimes without DCFTA and with DCFTA.

- Accounting and audit services;
- Architecture services;
- Commercial banking;
- Computer services;
- Constructions;
- Courier;
- Distribution services;
- Engineering services;
- Insurance services;

- Legal services;
- Logistics cargo-handling;
- Logistics customs brokerage;
- Logistics freight forwarding;
- Logistics storage and warehouse;
- Rail freight services;
- Road freight services;
- Telecommunications.

Services trade restrictiveness in Moldova in the scenario without DCFTA

Compared to the average of the EU countries which are OECD members, Moldova enforces higher average restrictiveness for imports of services. The Table 3 presents the indexes of the services trade restrictiveness for the policy measures that Moldova applies on the MFN basis. As shown in the table, when compared to the EU average, Moldova imposes a lower level of restrictiveness for trade in accounting, audit and legal services. The level of restrictiveness is comparable to the OECD average for the customs brokerage services, freight forwarding services and road cargo freight services. For other services, Moldovan level of trade restrictiveness is significantly higher as compared with the EU∩OECD average.

A couple of restrictive regulations affect the trade in services sensible to the mobility of specialists. Restrictions to the movement of people, while applicable to all sectors, represent particularly binding constraints to the freer trade in architecture services, computer services, construction services, engineering services, accounting and audit services and legal services – cross-border provision of these services obviously entail free movement of professionals. These restrictions include: application of economic test (labor market needs) from the part of the National Employment Agency when a resident company wants to hire a foreign specialist, the need to publish vacation advertisement in the newspapers, severe limitations on the length of stay for specialists (shorter than 12 months), and the fact that foreign licensed specialists need to take a local examination if they want to be licensed to practice locally, whereas no temporary or transitory licensing regimes are envisaged by the legislation.

There are a few restrictions applying on foreign entry. Moldovan legislation (Civil Code, art.102 and art.103) allows creation of branches and representations, but these are not recognized as distinct legal persons. This represents, according to the OECD STRI methodology, a restriction to market entry and establishment, which is a particularly binding constraint hindering the trade in financial services. Besides the fact that foreign branches of banks and insurance companies are not allowed, there are also restrictions regarding legal form of establishment (only joint stock companies are allowed). Also, commercial presence is required for all types of financial services provided. Precautionary measures also apply in form of ex-ante approval of mergers and acquisitions. Rail freight transport services is an extreme case which is completely closed to foreign entry. The mere fact that there is only one state-owned vertically integrated company (State Enterprise “Calea Ferata din Moldova”), which has full monopoly and total discretion over the market and the infrastructure, effectively denies market entry to other competitors. Competition is not allowed either in a large segment of the postal and courier services. The State Enterprise „Posta Moldovei” is recognized as monopolistic provider of a significant number of national postal services, with only express-delivery services open to competition. We estimate that the national post services, for which “Posta Moldovei” retains monopoly, represents around 10 percent of the total market for postal and courier services.

The category of other discriminatory measures is the least critical of all. However, there are some delays in implementation of the international standards in financial transparency and anti-money laundering (MONEYVAL, 2012), which represent a non-negligible constraint in the STRI methodology. In the baseline, the fact that the Government controlled one important financial institution (Banca de Economii) also serves as a hindering factor,

because it inevitably associates with discriminatory treatment of other commercial banks. In the same category of other discriminatory measures, the discriminatory treatment of foreign operators bidding for public procurement tenders is another group of measures restricting the trade in the baseline. They are particularly relevant in case of constructions services and of the road transport services.

The category of barriers to competition includes a relatively few number of restrictive measures. Among those important, one could mention the fact that the government controls major firms in the markets of cargo-handling services at airports, cargo-handling and storage at rail transport and in the telecom sector. This has major implications on the market competition, particularly as in some cases separation of accounts is not effectively imposed (which makes it possible to implement cross-subsidizations which hinder competition) and the incumbent firms can erect barriers in accessing key infrastructure. It has to be mentioned, though, that some of these sectors – cargo-handling at the airports and in the railroad, for instance - are not covered by concessions offered in the Association Agreement. However, we have included them in the assessment considering the fact that their restructuring is foreseen either by other relevant agreements between Moldova and the EU (Common Aviation Area Agreement) or are promoted as part of restructure programs supported by European financial institutions (restructure of the state-owned rail road carrier “Calea Ferata din Moldova).

The last generic group of trade restrictive measures is related to the regulatory measures. While in the baseline Moldova is relatively well positioned when it comes to public communication and consultation of the regulatory measures before entering legal force, as well as to the lack of visa regime for citizens of the EU member-countries (since 2006), some aspects bear heavily on businesses. High costs to complete a high number of mandatory procedures to register a company, and, in some cases, the unclear role of licensing for market access limit, in the baseline, the speed of provisions of some logistics services, such as cargo-handling, warehousing and storage, freight forwarding and customs brokerage.

Level of services trade restrictiveness in Moldova in the scenario with DCFTA

As part of the DCFTA, Moldova undertook a number of explicit and implicit obligations that are going to reduce the level of restrictiveness of international trade in services for the EU suppliers. While there are some legal intricacies, we assume that these changes will in fact apply as MFN basis and not only to the benefit of the EU companies. Below, we highlight the changes expected to be implemented following the DCFTA commitments and to impact the services trade restrictiveness, for each of the five groups of OECD STRI policy measures. The post-DCFTA levels of the indexes of services trade restrictions and percentage changes compared to the baseline levels are included in the Table 4.

Restrictions on foreign entry are going to lessen. It should be noted that Moldova already offers a relatively encouraging and non-discriminatory environment for the entry of foreign competitors in many of its services sectors. In fact, in some sectors the FDI is either dominant or significant, as in the case of mobile telecommunications, rapid mail delivery services, computer services, distribution services, commercial banking and insurance services. According to the Law no. 81 of 18 of March 2004 on investments in entrepreneurial activity, domestic and foreign investors enjoy equal status and rights. Despite the few number of restrictions, the market entry regime is likely to improve further following the implementation of Moldova’s commitments as part of the Association Agreement with EU. According to article 205, Moldova commits to ensure the establishment of subsidiaries, branches and representative offices of juridical persons of the EU treatment no less favorable than that accorded by the Republic of Moldova to its own juridical persons, their branches and representative offices. We may expect, for instance, partnerships to be allowed as legal form for establishing auditing and accounting companies. Privatizations of the state-owned enterprises in the telecommunications sector (already planned for 2017), rail freight services (except infrastructure), cargo-handling and warehousing and storage services (air travel,

also likely to take place in 2017) may reduce entry barriers for domestic and foreign players in these markets. According to Annex XXVII-E of the Association Agreement, Moldova secured some reservations on establishment according to refer to the legal services and to the international postal services as well as internal postal services related to letters up to 350 g, for both of which “Posta Moldovei” retains monopoly. However, for all other postal services, the market should open. According to the article 208, some differentiated rules of branches treatment may apply, in particular, in case of financial services for prudential reasons. We therefore expect that branches of foreign financial institutions will not be totally banned but rather some restrictions will apply.

Table 3. Baseline Services Trade Restrictiveness Index for Moldova

	Restrictions on foreign entry	Restrictions to movement of people	Other discriminatory measures	Barriers to competition	Regulatory transparency	Overall	OECD∩EU members
Accounting and audit services	0.06	0.12	0.02	0.00	0.02	0.22	0.26
Architecture services	0.00	0.18	0.03	0.00	0.03	0.25	0.23
Commercial banking	0.11	0.07	0.06	0.01	0.05	0.30	0.13
Computer services	0.00	0.15	0.05	0.02	0.04	0.25	0.17
Constructions	0.02	0.12	0.11	0.00	0.04	0.29	0.16
Courier	0.11	0.07	0.04	0.13	0.08	0.43	0.14
Distribution services	0.02	0.04	0.01	0.05	0.04	0.16	0.11
Engineering services	0.00	0.17	0.03	0.00	0.03	0.23	0.21
Insurance services	0.19	0.04	0.02	0.03	0.01	0.29	0.15
Legal services	0.04	0.14	0.02	0.01	0.02	0.24	0.38
Logistics cargo-handling	0.07	0.06	0.03	0.17	0.05	0.39	0.16
Logistics customs brokerage	0.00	0.07	0.02	0.03	0.06	0.17	0.12
Logistics freight forwarding	0.00	0.06	0.02	0.00	0.05	0.12	0.13
Logistics storage and warehouse	0.06	0.05	0.03	0.14	0.04	0.33	0.14
Rail freight services	0.43	0.10	0.06	0.31	0.10	1.00	0.14
Road freight services	0.03	0.09	0.04	0.00	0.01	0.16	0.16
Telecommunications	0.02	0.04	0.02	0.12	0.02	0.22	0.14

Source: author's estimates based on the OECD STRI policy simulator, <http://sim.oecd.org/default.ashx>

Restrictions to movement of people will be alleviated. According to the provisions of the Association Agreement (art. 215) the temporary entry and temporary stay of key personnel and graduate trainees shall be for a period of up to three years for intra-corporate transferees. Currently, Moldova applies 12 months and, according to Agreement, we expect that this period will increase up to 36 months. According to the Agreement, the temporary presence of contractual service suppliers and independent professionals will remain limited at 12 months, however. For all categories, nonetheless, the labor market needs test currently applied by the National Employment Agency will be abolished (art.210, para.2, (a)). Moreover, the Agreement foresees a potential mechanism for mutual recognition of the criteria applied by each Party for the authorization, licensing, operation and certification of entrepreneurs and service suppliers and, in particular, professional services. Following these changes, the mobility of the key personnel will increase and this will provide significant alleviation of the current levels of trade restrictiveness, especially for architecture services, computer services, construction services, courier and distribution services, accounting and audit services and insurance services.

Other discriminatory measures are going to be outright abolished. In the baseline, most of these measures refer to public procurement rules. Following the Association Agreement, Moldova will adopt (in fact, already adopted) a new law on public procurements to ensure equal treatment of local and foreign economic operators and forbid discriminations. This is particularly relevant for the trade in constructions services. Also, we expect that following the Agreement, international anti-money laundering rules will be effectively imposed in the financial sector. In some sectors, such as rail cargo-handling and rail warehouse and storage, we expect that some degree of monopoly will be retained by the state operating the rail infrastructure. Another aspect under which justified discriminatory measures will continue are state subsidies (as they are explicitly excluded from the Association Agreement), but from all services we analyze they are likely to be relevant only for the niche of the national postal services which, in any case, are not going to be liberalized.

Barriers to competition will be removed to a significant extent. In six of the services sector we analyze, the level of restrictiveness to competition is nil in the baseline and will persist in the post-DCFTA phase. In the commercial banking services sector, one of the unintended consequences of “Banca de Economii” failure is that the state ceased to control a major player in the sector and the barriers to free competition have been removed. In the computer services sector, the restrictions to competition will remain because the state will retain control of the State Enterprise “Registru” which is an important player in the sector and because there are no specific commitments from the part of Moldovan Government regarding this issue. The Agreement also will bring about a more intense competition in some postal services that are going to open for competition, but its practical impact is set to be negligible because of their economic insignificance and lack of credible interests from the part of EU operators. With regards to distribution services, even though the Agreement is not quite vocal regarding the competition, we expect that the market competition will improve following a more effective regulation by the Competition Council of vertical agreements (moreover, the sector can open up even for products which are explicitly covered by the negative list of the Agreement, such as distribution of oil products). The Agreement will not have any material implication for the competition in the insurance sector, where some regulations will persist regarding the nature of assets used as collateral, as well as regulations concerning provision of compulsory insurance services (such as motor third party liability insurance). The transport and logistics services are set to benefit of the Association Agreement as barriers to competition will be alleviated or outright set nil following the imposition of vertical separation in the rail freight and rail-related logistics services and abolishment of the license for the customs brokerage services. In the telecommunications sector, the competition will improve following enhanced capacities of the regulator to effectively impose the incumbent in the fixed telephony to share the key infrastructure with other players at transparent and reasonable costs.

Regulatory transparency will improve, to some extent, following the Association Agreement. Some of the expected changes come as part of other agreements (i.e. not the Association Agreement) and following implementation of domestic reforms. For instance, an welcomed development has been the abolishment by the Moldovan Parliament of the minimum required capital for establishment of a limited liability company which took place in 2014 and cannot attributed do the Association Agreement. We do not attribute this development to the Association Agreement though. The Association Agreement envisages a number of important trade-enhancing and trade-facilitation measures and we assume that one of their combined effects will be in reduction of time and costs of the customs procedure. An assumed reduction of the length of the customs procedures below 2 working days is incorporated in our post-DCFTA assessment of the services trade restrictiveness index.

All combined, alleviation of policy measures will make the imports of services in Moldova less restrictive. If duly implemented, the trade in rail freight services will be affected by the highest reduction in level of restriction (around 70 percent) from being completely closed to foreign competition to a level of around 0,29 on the STRI scale. However, this sector represents a rather extreme case of opening up a sector completely closed in the baseline. In the other sectors, the intensity of measures restricting foreign trade in services is expected to decline on average by 40 percent. This is a non-negligible figure, which is likely to translate into a more visible presence of the foreign providers of services in the Moldovan economy. While the attractiveness of the tiny Moldovan markets for the European service providers should not be overstated, a higher degree of openness may provide opportunities to the European SMEs and innovative start-ups. As presented in the next chapter, a wider openness to the services imports is likely to increase the efficiency of the manufacturing sectors downstream and of the services sector as such, with some systemic gains.

Table 4. Post-DCFTA Services Trade Restrictiveness Index for Moldova

	Restrictions on foreign entry		Restrictions to movement of people		Other discriminatory measures		Barriers to competition		Regulatory transparency		Overall	
	Post-DCFTA	% of baseline	Post-DCFTA	% of baseline	Post-DCFTA	% of baseline	Post-DCFTA	% of baseline	Post-DCFTA	% of baseline	Post-DCFTA	% of baseline
Accounting and audit services	0.05	80	0.09	73	0.00	0	0.00	n.app.	0.02	67	0.15	67
Architecture services	0.00	n.app.*	0.12	64	0.00	0	0.00	n.app.	0.03	67	0.15	56
Commercial banking	0.10	88	0.05	73	0.00	0	0.00	0	0.05	100	0.19	65
Computer services	0.00	n.app.	0.09	63	0.00	0	0.02	100	0.04	67	0.15	55
Constructions	0.02	100	0.08	70	0.00	0	0.00	n.app.	0.04	75	0.14	47
Courier	0.09	83	0.05	69	0.01	19	0.07	53	0.05	63	0.26	62
Distribution services	0.02	100	0.03	63	0.00	0	0.02	50	0.03	75	0.10	62
Engineering services	0.00	n.app.	0.12	70	0.00	0	0.00	n.app.	0.03	67	0.15	61
Insurance services	0.06	33	0.03	70	0.01	50	0.03	100	0.01	100	0.14	50
Legal services	0.04	100	0.10	70	0.00	0	0.01	100	0.02	67	0.17	69
Logistics cargo-handling	0.06	81	0.04	62	0.00	9	0.09	107	0.03	81	0.21	54
Logistics customs brokerage	0.00	n.app.	0.05	75	0.00	0	0.00	0	0.03	40	0.08	43
Logistics freight forwarding	0.00	n.app.	0.04	63	0.00	0	0.00	n.app.	0.03	60	0.07	53
Logistics storage and warehouse	0.04	60	0.03	63	0.01	25	0.07	50	0.03	60	0.18	53
Rail freight services	0.08	18	0.04	38	0.00	0	0.15	47	0.03	25	0.29	29
Road freight services	0.03	100	0.06	63	0.00	0	0.00	n.app.	0.01	67	0.09	55
Telecommunications	0.01	50	0.03	62	0.01	25	0.09	75	0.02	67	0.15	65

Note: * - n.app. stands for 'not applicable' and refers to those aspects which had zero level of restrictiveness in the baseline.

Source: author's estimates based on the OECD STRI policy simulator, <http://sim.oecd.org/default.ashx>

Services trade restrictiveness in EU in the scenario without DCFTA

In the baseline, the MFN levels of STRI for EU countries are already quite low across most of the services sectors. As shown in more details in Annex 1, the legal services are heavily regulated, with Poland and Luxembourg standing out as particular cases where the sector is completely closed to international trade. Austria, Estonia, France, Greece, Hungary, Slovak Republic and Slovenia also enforce a very restrictive trade regime with legal services. Belgium, France and Portugal are very restrictive regarding trade in accounting and audit services, while Poland, Slovak Republic and Slovenia – regarding trade in architecture and engineering services. Limitations to movement of people are the main source of restrictions, while those restricting market entries come second (Table 5).

The services which are particularly important for Moldovan exports enjoy a high degree of trade openness in the baseline. The STRI levels for road freight transport are closely distributed around 0.15, for telecommunication services – around 0.14, for logistics services – around 0.13. For computer services, the average STRI is around 0.17, even though in some countries - above 0.20. The reader can find more details in the Annex 1.

Table 5. Baseline Services Trade Restrictiveness Index for EU

	Restrictions on foreign entry	Restrictions to movement of people	Other discriminatory measures	Barriers to competition	Regulatory transparency	Overall
Accounting and auditing	0.10	0.12	0.01	0.01	0.03	0.26
Air transport	0.20	0.02	0.00	0.13	0.01	0.37
Architecture services	0.03	0.14	0.01	0.01	0.04	0.23
Commercial banking	0.05	0.03	0.00	0.03	0.03	0.13
Computer services	0.02	0.07	0.01	0.02	0.05	0.17
Construction	0.02	0.06	0.02	0.01	0.05	0.16
Courier	0.02	0.03	0.00	0.06	0.03	0.14
Distribution services	0.03	0.02	0.00	0.03	0.03	0.11
Engineering services	0.03	0.12	0.01	0.01	0.04	0.21
Insurance	0.10	0.02	0.00	0.01	0.01	0.15
Legal services	0.16	0.16	0.01	0.02	0.03	0.37
Logistics cargo-handling	0.01	0.04	0.00	0.08	0.03	0.16
Logistics customs brokerage	0.01	0.05	0.00	0.01	0.04	0.12
Logistics freight forwarding	0.01	0.04	0.00	0.01	0.03	0.10
Logistics storage and warehouse	0.01	0.04	0.00	0.06	0.03	0.14
Rail freight transport	0.02	0.03	0.00	0.06	0.02	0.14
Road freight transport	0.06	0.04	0.00	0.03	0.01	0.15
Telecommunications	0.02	0.02	0.01	0.07	0.02	0.14

Source: aggregated by author after downloading individual countries ratings from the OECD statistical database, <http://stats.oecd.org/Index.aspx?DataSetCode=STRI>.

Services trade restrictiveness in EU in the scenario with DCFTA

The list of EU reservations regarding the free trade in services is very extensive and complicated, as it includes both EU-level and members-level reservations. A recent source (ed. Emerson and Cenusa, 2016), has counted 161 reservations on the part of the EU, including 32 EU-wide and 129 – member-state specific only for the market entry and establishment alone. These reservations are consistent with the EU and member-states commitments regarding WTO under the General Agreement on Trade in Services. For the sake of comparison, Moldova retained only 2 horizontal reservations (including the restriction on buying agricultural land, which is of little relevance and practical impact for most of the services) and 10 sectoral reservations, mainly in the legal services and personal services sectors.

EU and member-states also retained a large number of reservations regarding cross-border supply of services. According to the source quoted above, there are 273 reservations on the EU side, and only 6 on Moldovan. Large number and diversity of reservations effectively mean no significant changes in the trade regime for the cross-border mode of supply of services by Moldovan suppliers.

The mobility of personnel is also subject to significant EU reservations. Emerson and Cenusa (2016) mention existence of 177 reservations applied by EU and member-states, compared to only 7 reservations on the Moldovan side. Again, this will significantly limit any increase in the mobility of potential Moldovan services providers.

The extent, nature and complexity of reservations effectively mean little, if any, additional reduction in restrictiveness of trade on EU side for Moldovan services providers. Most of the EU-wide and member-states specific reservations refer to very important aspects of international trade in services, including residency or even nationality requirements, economic needs tests, compulsory commercial presence. Therefore, we assume that the post-DCFTA level of restrictiveness on the part of the EU is only marginally better than in the baseline. As the EU baseline level of protection of services sector is quite low, the problems that Moldovan services providers may encounter are most probably linked to the intrinsic weaknesses of the Moldovan providers than to the EU barriers.

4. Modeling the liberalization of the trade in services in a CGE framework

Brief CGE model description

For this analysis, a recursively-dynamic Computable General Equilibrium model of the Moldovan economy similar to that used in World Bank (2016). On its turn, the model used in the World Bank (2016) represents an extended version of the standard model that is fully documented in Lofgren et al (2002). The standard static model has been transformed into recursively-dynamic model following an approach similar to that used by Thurlow (2004) for the South Africa. The CGE models in this class usually assume that economic agents have adaptive expectations, thus allowing the model to be solved as a time sequence of equilibria. In the case of services liberalization scenarios, the model's dynamics are determined by the changes in the capital and the corresponding changes in trade-related parameters.

The most important services sectors are explicitly included in the model. The services sectors that are explicitly included in the model are constructions, distribution, transport and logistics (combined), telecommunications and postal services (combined), computer services and other business services. An equation similar to that used in Robinson et al. (2002) has been included in the model to update the changes in the total factor productivity of the downstream industries following the liberalization of the import of services.

This model is calibrated on the basis of a Moldova's Social Accounting Matrix (SAM) reproducing Moldovan economy in 2013. The SAM has been developed by the author, using statistical data provided by the National Bureau of Statistics, National Bank of Moldova, the Ministry of Finance, and the Customs Services of Moldova. Moldova's SAM has a high level of disaggregation, including (see details in Table 6):

- 39 economic activities;
- 39 types of goods and services matching one-to-one the economic activities;
- Three types of transaction costs (domestic, export and import markets)
- Four types of production factors (low- and high-wage labor, capital and self-employment);
- Financial and non-financial corporations and government;
- Households disaggregated by quintiles and areas of residence;
- Six types of taxes;
- Four geographical trading regions (EU, Russia, other CIS countries, other countries).

Modelled scenarios

0. Baseline growth path

The baseline simulates the economic development under the business-as-usual conditions (no liberalization) for the decade 2014-2023. The economic dynamics are driven only by endogenous changes in capital, with a depreciation rate of 6 percent, which is consistent with the aggregate data reported by Moldovan firms for the period 2012-2014. The baseline assumes no changes in STRI parameters with any trading partner. When discussing the results of the simulations, we compare the alternative scenarios to the baseline.

Under the baseline growth path, the real GDP grows by 3.2 percent annually for over the period 2014-23. This figure is smaller than the historical growth over the period 2004-2013, however, we believe that it reflects the current economic hardships following the multiple external and internal crises that undermined the growth potential for the next decade (bank fraud, stagnation in Russia, maintenance of the Russian trade barriers, extensive droughts, depreciation of the Ukrainian currency, slow economic recovery in EU).

Table 6. List of Accounts in the SAM and in the Moldova DCGE Model

Activities: 1. Agriculture and fishery 2. Mining and quarrying industry 3. Meat processing industry 4. Fish processing industry 5. Fruits and vegetables processing 6. Oils and fats production 7. Dairy production 8. Cereals processing 9. Animal feed and other food products industries 10. Beverages industry 11. Tobacco products industry 12. Apparel, clothes and footwear industries 13. Wood and paper products industry 14. Printing and publishing industry 15. Chemicals, rubber and plastic products industry 16. Other non-metallic minerals industry 17. Metallurgy 18. Finished metal products industry 19. Machinery, precision instruments, transport equipment industries 20. Electronic industry 21. Production of furniture and other products 22. Waste recovery and recycling 23. Electricity, gas, water distribution 24. Construction 25. Retail and wholesale trade 26. Hotels and restaurants 27. Transport and warehousing 28. Communication 29. Financial activities 30. Real estate transactions 31. Other commercial services to businesses 32. Computer services, research and development 33. Public administration 34. Education 35. Health care and social assistance 36. Municipal services 37. Associations, n.i.e. 38. Recreation, culture, sports 39. Other private services Domestic institutions: 1. Enterprises 2. Government 3. First quintile rural households 4. Second quintile rural households 5. Third quintile rural households 6. Fourth quintile rural households 7. Fifth quintile rural households 8. First quintile urban households 9. Second quintile urban households 10. Third quintile urban households 11. Fourth quintile urban households 12. Fifth quintile urban households	Commodities: 1. Agriculture and fishery 2. Mining and quarrying industry 3. Meat and meat products 4. Fish and fish products 5. Fruits and vegetables 6. Oils and fats 7. Dairy products 8. Cereal products 9. Animal feed and other food products 10. Beverages 11. Tobacco products 12. Apparel, clothes and footwear 13. Wood and paper products 14. Printing and publishing 15. Chemicals, rubber and plastic products 16. Other non-metallic minerals 17. Metallurgy 18. Finished metal products 19. Machinery, precision instruments, transport equipment 20. Electronic industry 21. Furniture and other products 22. Waste recovery and recycling 23. Electricity, gas, water distribution 24. Construction 25. Retail and wholesale trade 26. Hotels and restaurants 27. Transport and warehousing 28. Communication 29. Financial activities 30. Real estate transactions 31. Other commercial services to businesses 32. Computer services, research and development 33. Public administration 34. Education 35. Health care and social assistance 36. Municipal services 37. Associations, n.i.e. 38. Recreation, culture, sports 39. Other private services Factors of production: 1. Labor low wages 2. Labor high wages 3. Capital 4. Self-employment	Trading regions: 1. EU27 2. Russia 3. Other CIS countries 4. Other countries – rest of the world Taxes: 1. Payroll tax 2. Other taxes on production (net of other subsidies on production) 3. Direct taxes 4. VAT 5. Other indirect taxes on products (net of subsidies on products) 6. Customs duties Capital accounts: 1. Enterprises 2. Government 3. First quintile rural households 4. Second quintile rural households 5. Third quintile rural households 6. Fourth quintile rural households 7. Fifth quintile rural households 8. First quintile urban households 9. Second quintile urban households 10. Third quintile urban households 11. Fourth quintile urban households 12. Fifth quintile urban households 13. Stock changes Transaction costs: 14. Domestic 15. Export-related 16. Import-related
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Source: the Moldova DCGE model.

1. MD_STRI scenario: Moldova reduces the services trade restrictiveness

Under this scenario, Moldova implements the provisions of the Association Agreement concerning the services, with corresponding reductions in the level of the STRI for every service sector included in the model. The impact of the liberalization of the trade in services translates through import prices for traded services. Changes in import prices are assumed to vary according to a logistic function that accounts for the magnitude of the changes in the STRI indexes for Moldova in the simulated scenario compared to the baseline and also accounts for the initial level of protection. The changes introduced in the model are presented in the Table 7.

Table 7. Changes in import prices for modelled services

Modeled service sector	Price change compared to baseline scenario, percent	OECD STRI service sector included	Share in the model, percent
Constructions	-15	Constructions	100
Transport and warehousing	-12	Logistics cargo-handling	1.25
		Logistics customs brokerage	1.25
		Logistics freight forwarding	1.25
		Logistics storage and warehouse	1.25
		Rail freight transport	10
		Road freight transport	85
Telecommunications and postal services	-9	Telecommunications services	90
		Courier services	10
Financial services	-10	Commercial banking	90
		Insurance services	10
Other commercial services provided mainly to businesses	-9	Accounting and audit	20
		Legal services	20
		Engineering and architecture	45
		Other services (not modelled)	5
Computer services, research and development	-9	Computer services	80
		Research and development (not modelled)	20

Sources: SAM, author estimates.

2. MD_MARG scenario: Moldova reduces the transaction costs

Distribution services represent a particular case, and their liberalization is simulated in the second scenario. Moldovan trade statistics does not include any imports of the distribution services, as these are not practically imported. However, we believe that this is a key sector to account for, considering the extremely high transaction costs one can observe in the Moldovan Social Accounting Matrix: around 15 percent for exports, around 6 percent for domestic supplies and more than 22 percent for imports. Their liberalization by Moldova is modelled through reduction in commercial margin (transaction costs), using a logistic function similar to scenario 1. It is assumed that the commercial margin will decrease permanently by 5 percent compared to the baseline scenario following the implementation of the Association Agreement. We assume this reduction will come out of an increased competition driven by new market entrants (both EU and domestic) and by the dismantlement of the monopolistic structures currently limiting the competition.

3. EU_STRI scenario: EU reduces the services trade restrictiveness

This scenario has been modeled through higher export price margins received by Moldovan exporters of services after EU reduces barriers against service imports from Moldova. However, as the above analysis of the Association Agreement shows, the DCFTA includes so many reserves on the side of the EU, that the impact on market access for Moldovan service providers would be quite small. In fact, Moldova already benefits of the MFN treatment that EU has committed to under the Association Agreement. Under the EU's MFN regime, the baseline average level of restrictiveness regarding the trade in services is already quite small, around 0.17. The highest level of protection is for legal services (0.38) for which Moldova has also retained significant reservations. We have assumed that the current level of STRI imposed by EU will uniformly reduce by 10 percent, which will translate in rather modest gains in export prices for the Moldovan services providers (Table 8).

Table 8. Changes in export prices for modelled services

Modeled service sector	Price change compared to baseline, percent
Constructions	1.6
Transport and warehousing	1.6
Telecommunications and postal services	1.4
Financial services	1.3
Other commercial services provided mainly to businesses	2.7
Computer services, research and development	1.7

Sources: SAM, author estimates.

4. ALL scenario: Moldova and EU reduce services trade restrictiveness and transaction costs decrease

This is a combined scenario. It assumes that both EU and Moldova implement the provisions of the Association Agreement at the same time and that the trade margin for domestic supplies, export and import transactions in Moldovan economy will decline by 5 percent permanently.

Discussion of the simulation results.

All scenarios have a positive impact on the GDP and its key expenditures components. The liberalization of the trade in services *per se* by Moldova has a non-negligible long-term positive impact on the GDP annual growth rates (0.1 percent points), but the liberalization on the part of the EU has almost no effect, because of the small magnitude of changes in the trade restrictiveness indexes (Table 9). However, the reduction in the transaction costs following domestic reforms resulting in market competition improvement has the biggest impact on the economic activity indicators. The simulated permanent 5 percent reduction of the trade margin associates with plus 0.7 percent points to the annual GDP growth rate. Combined impact of the liberalization of trade in services and of the reduction of the transaction costs following implementation of the Association Agreement may bring 0.8 additional percent points to the GDP.

Table 9. Impact on the annual growth rates of key GDP components of the simulated scenarios, percent points changes compared to the baseline

Indicator	Scenarios			
	MD_STRI	EU_STRI	MD_MARG	ALL
Absorption	0.1	0.0	0.4	0.5
Private consumption	0.0	0.0	0.3	0.4
Government consumption	0.0	0.0	0.3	0.4
Fixed investment	0.0	0.0	0.5	0.6

Exports	0.1	0.0	1.2	1.4
Imports	0.1	0.0	0.7	0.8
GDP	0.1	0.0	0.7	0.8

Source: model simulation results.

Table 10. Impact on the annual growth rates of activities output of the simulated scenarios, percent points changes compared to the baseline

Activity	Scenario			
	MD_STRI	EU_STRI	MD_MARG	ALL
Agriculture and fishery	0.10	0.00	0.67	0.76
Mining and quarrying industry	0.09	0.01	0.28	0.37
Meat processing industry	0.04	0.00	0.35	0.39
Fish processing industry	0.03	0.00	0.22	0.25
Fruits and vegetables processing	0.01	0.00	0.27	0.28
Oil and products industry	1.50	-0.03	7.44	8.28
Dairy production	0.01	0.00	0.18	0.20
Cereals processing	0.46	-0.01	2.79	3.14
Animal feed and other food products industries	0.06	0.00	0.63	0.69
Beverages industry	0.01	0.00	0.21	0.21
Tobacco products industry	0.06	0.02	1.04	1.09
Apparel, clothes and footwear industries	-0.27	-0.03	-2.18	-2.41
Wood and paper products industry	0.04	0.00	0.84	0.85
Printing and publishing industry	0.04	0.01	0.30	0.34
Chemicals, rubber and plastic products industry	0.12	0.01	1.36	1.47
Other non-metallic minerals industry	0.06	0.01	0.51	0.58
Metallurgy	0.21	0.01	3.62	3.87
Finished metal products industry	0.06	0.01	0.87	0.93
Machinery, precision instruments, transport eq.	-0.17	-0.03	-1.21	-1.38
Electronic industry	-0.05	-0.01	0.26	0.22
Production of furniture and other products	0.00	-0.03	1.56	1.47
Waste recovery and recycling	0.09	0.01	0.57	0.68
Electricity, gas, water distribution	0.08	0.01	0.50	0.59
Construction services	0.03	0.01	0.36	0.40
Retail and wholesale trade	0.12	0.00	0.02	0.13
Hotels and restaurants	0.02	0.01	0.06	0.09
Transport and warehousing	-0.01	0.04	0.33	0.35
Communication services	0.00	0.07	0.02	0.09
Financial activities	0.00	0.01	0.27	0.28
Real estate transactions	0.04	0.01	0.15	0.19
Other commercial services to businesses	0.01	0.01	0.19	0.20
Computer services, research and development	-0.09	0.07	-0.18	-0.20
Public administration	0.00	0.00	0.00	0.00
Education	0.00	0.00	0.02	0.02
Health care and social assistance	0.00	0.00	0.00	0.00
Municipal services	0.10	0.00	0.59	0.69

Associations, n.i.e.	0.02	0.00	0.17	0.20
Recreation, culture, sports	0.01	0.00	0.08	0.10
Other private services	0.01	0.00	0.02	0.03

Source: model simulation results.

A number of manufacturing activities – apparel, machinery, electronic industry - reduce their economic activity under the liberalization of the services import compared to the baseline. This may seem counter-intuitive (Table 10). The explanation is in a slight relocation of the labor and capital from these over-extended industries to those becoming more productive under the new regime. It has to be mentioned that currently these industries are highly competitive, operate under the Lohn agreements, however, most of the value-added is exported, while local production factors are poorly remunerated. Liberalization of services imports does not have a detrimental impact on the domestic services. The domestic transport services will slightly reduce their level of activity following higher competition from foreign entrants, however, this is more than compensated by the wider access of the domestic cargo freighters to the EU market. This finding is important, as it suggest that in case of transport services even small improvements in market access may come with important benefits for the Moldovan cargo transporters. In case of the computer services, liberalization of imports seems to take away a part of the domestic market, which is not compensated by the improvement of the exports regime to the EU market.

As expected, liberalization of the import of services enhances the efficiency of the economic sectors. However, the services sectors themselves are the main beneficiaries of the efficiency-enhancing mechanism, as the annual growth of their Total Factor Productivity adds 0.1 percent points compared to the baseline scenario. A number of manufacturing industries – some food industries, production of oils and fats – also benefit of the enhanced efficiency, but to lower extent. Again, the reduction in trade margin has by far a much high impact on the factors efficiency, as the annual growth in TFP in the manufacturing industry adds around 0.3 percent compared to the baseline scenario.

Table 11. Impact on the annual growth rates of the Total Factor Productivity of the simulated scenarios, percent points changes compared to the baseline

Activity	Scenario			
	MD_STRI	EU_STRI	MD_MARG	ALL
Agriculture and fishery	0.00	0.00	0.01	0.01
Mining and quarrying	0.00	0.00	0.03	0.04
Manufacturing industry	0.01	0.00	0.03	0.04
Market services	0.02	0.00	0.06	0.09
Public services	0.00	0.00	0.02	0.03

Source: model simulation results.

The impact of the simulated scenarios on the foreign trade is in line with the economic intuition. Almost all regional trade flows grow following liberalization of the trade in services and reduction in the trade margin. A modest trade diversion from non-EU markets is present in the case of the scenario when EU liberalizes imports of services from Moldova, but this is more than compensated by the exports-enhancing impact of the reduction in trade margins (Table 12). It is important to note that as imports of services increase following the reduction in restrictiveness, the net effect on exports is positive, an effect which goes through relocation of production factors, enhanced total factor productivity and high competitiveness of export prices. However, while looking at a more detailed picture of the exports by types of services and goods (Table 13), one can note that exports of some goods and services decline. In most of the cases this happens following the reduction of trade margin and substitution of foreign sales with domestic sales. Transport and constructions services are likely to experience a boost in export potential in all scenarios.

Table 12. Impact on the annual growth rates of the regional foreign trade flows for the simulated scenarios, percent points changes compared to the baseline

Region	Scenario			
	MD_STRI	EU_STRI	MD_MARG	ALL
	Exports			
Russia	-0.01	-0.02	0.28	0.26
Other CIS countries	0.14	-0.01	1.04	1.16
EU27	0.25	0.02	1.76	2.01
Other countries	0.04	-0.01	0.41	0.44
	Imports			
	MD_STRI	EU_STRI	MD_MARG	ALL
Russia	0.21	0.01	0.91	1.12
Other CIS countries	0.13	0.01	0.87	1.00
EU27	0.15	0.01	0.77	0.93
Other countries	0.15	0.01	0.66	0.82

Source: model simulation results.

Table 13. Impact on the annual growth rates of the exports of goods and services for the simulated scenarios, percent points changes compared to the baseline

Commodity	Scenario			
	MD_STRI	EU_STRI	MD_MARG	ALL
Agriculture, viniculture, forestry products	0.07	-0.01	0.49	0.55
Animal feed and other food products	0.11	0.00	1.52	1.61
Apparel, clothes and footwear industries	-0.32	-0.04	-2.57	-2.86
Beverages industry	-0.01	0.00	0.18	0.17
Cereals processing	0.62	0.00	3.80	4.26
Chemicals, rubber and plastic products industry	0.13	0.01	1.58	1.70
Communication services	-0.01	0.13	-0.21	-0.09
Computer services, research and development	-0.10	0.13	-0.57	-0.55
Construction services	0.03	0.08	0.36	0.46
Recreation, culture, sports	0.00	0.00	0.00	0.00
Dairy production	0.00	0.00	0.04	0.04
Electronic industry	-0.06	-0.01	0.28	0.23
Electricity, gas, water distribution	0.13	0.00	0.38	0.51
Financial activities	0.00	0.04	-0.04	-0.04
Fish processing industry	0.00	0.00	0.00	0.00
Production of furniture and other products	0.00	-0.04	1.74	1.64
Fruits and vegetables processing	0.00	0.00	0.27	0.26
Machinery, precision instruments, transport equipment industries	-0.20	-0.04	-1.44	-1.65
Meat processing industry	0.05	0.00	0.49	0.52
Metallurgy	0.26	0.00	4.41	4.69
Finished metal products industry	0.06	0.00	1.23	1.28
Other non-metallic minerals industry	0.07	0.01	0.57	0.64
Other commercial services to businesses	0.00	0.04	-0.13	-0.04
Oil and products industry	1.79	-0.03	8.83	9.84
Printing and publishing industry	0.00	0.00	0.21	0.21

Real estate transactions	0.00	0.00	-0.17	-0.17
Mining and quarrying industry	0.09	0.00	0.07	0.18
Hotels and restaurants	0.00	0.00	-0.21	-0.21
Tobacco products industry	0.00	0.00	1.85	1.85
Transport and warehousing	0.02	0.07	0.23	0.32
Wood and paper products industry	0.04	-0.01	0.89	0.89

Source: model simulation results.

The simulated scenarios impact positively the governmental budget. The budgetary revenue grow following broadening the taxation base. In fact, all key fiscal sources show significant growth rates, with PIT displaying the highest positive deviation of the growth rate compared to the baseline scenario. As the core governmental expenditures are projected to stay constant, the budgetary deficit improves slightly (Table 14), while the debt burden decreases with similar magnitude.

Table 14. Impact on the annual growth rates of budgetary revenues by sources and on the deficit, percent points changes compared to the baseline

Indicator	Scenario			
	MD_STRI	EU_STRI	MD_MARG	ALL
VAT	0.10	0.00	0.35	0.44
Excises	0.08	0.01	0.47	0.57
Personal income tax	0.12	0.02	0.84	0.97
Corporate income tax	0.05	0.02	0.22	0.28
Mandatory social and medical insurance contributions	0.08	0.01	0.61	0.70
Local taxes	0.14	0.01	0.70	0.83
Customs duties	0.09	0.01	0.69	0.79
Current governmental expenditure	0.00	0.00	0.08	0.07
Deficit	0.00	0.00	0.01	0.01

Source: model simulation results.

Liberalization of services increases the welfare of the households. The income of the households will increase across all quintiles, both in rural and urban area. However, in the urban area the income of the superior quintiles grows faster than the income of the first quintiles, resulting in an increased level of income inequality. In rural area, there is an opposite dynamic of convergence to the mean, as the income of the poorer quintiles tend to grow faster. These patterns are explained by differences in employment: the more better off urban inhabitants are employed in sectors benefiting mostly from the improved trade conditions, while in rural areas, the poor people are mostly employed in agriculture, which will experience some efficiency gains.

Table 15. Impact on the annual growth rates of households revenues, percent points changes compared to the baseline

Households group	Scenario			
	MDSER	EUSER	MD_MARG	ALL
	Urban			
Quintile 1	0.04	0.00	0.22	0.27
Quintile 2	0.06	0.01	0.41	0.48
Quintile 3	0.06	0.01	0.40	0.47
Quintile 4	0.07	0.01	0.48	0.56
Quintile5	0.07	0.01	0.49	0.57

	Rural			
Quintile 1	0.06	0.01	0.40	0.47
Quintile 2	0.06	0.01	0.36	0.42
Quintile 3	0.06	0.01	0.36	0.42
Quintile 4	0.06	0.01	0.36	0.42
Quintile 5	0.04	0.00	0.22	0.26

Source: model simulation results.

5. Conclusions and recommendations

The liberalization of the trade in services between Moldova and the EU has a positive impact on the economic performance of the former. However, the main positive impact comes through the reduction in the trade margins gained by market intermediaries rather than as an effect of more foreign players entering the Moldovan markets of transport, telecommunications, commercial banking and other services which are part of the core production processes. This finding underlines the crucial importance of alleviating the constraints that negatively influence the level of domestic competition in the trade and related sectors. Persistence of over-extended yet monopolized trade chains results in value added deviated from producers to those enabling and creating these non-competitive chains.

While the reduction by the Republic of Moldova of barriers to market entry and increased mobility of personnel also has a non-negligible impact, it is nonetheless smaller than the impact of the reduction of the trade margin. This result comes as no surprise considering the fact that foreign companies are already present in a number of service sectors – including telecommunications, accounting and audit, constructions, insurance, commercial banking. In fact, in many of these sectors the foreign capital already has a dominant presence. Moldovan economy is very small and its attractiveness and importance for European providers of services should not be overstated. Despite this, liberalization of the trade in services is very important primarily for the reason of increased economic efficiency and, indeed, should be pursued even beyond Moldova's commitments enshrined in the Association Agreement. In this regard, the opening of the rail freight cargo is an important aspect as it comes with high benefits for the rest of the economy.

At the same time, the impact of the EU's liberalization of the trade in services is very small, even negligible, except the sector of road cargo transport services. The EU's current level of restrictions in the services trade is already quite low and there is little, if any, additional liberalization coming from the Association Agreement. Under the current level of EU-Moldova relation little can be done with reasonable efforts and costs to ensure Moldovan providers a treatment going beyond the MFN regime. The competitiveness of the Moldovan exports of services can be increase primarily following investments in human capital, by improving the competence of the managers and key personnel and the productivity of the employees, and investment in customs-related and logistical infrastructure.

Our quantitative assessments may understate the positive impact associated with liberalization of the trade in services. First off all, we did not cover the services for final consumption (air travel, tourism, health, education etc.). Secondly, we did not consider the likely fact that new services may arise in the future which are not covered by the Association Agreement. We have not have enough data to estimate the impact of reducing the rent-seeking behavior associated with highly regulated services sectors in the Moldovan economy. Finally, we did not have enough data or evidence on the exact functional dependency between the services trade restrictiveness and the export/import prices.

Following the analysis, a number of faster or additional horizontal and sector-level policy measures could be adopted by the Moldovan government to enhance the positive impact of the services trade liberalization. They include the following:

Horizontal:

- Increase the length of stay of for intra-corporate transferees up to 48 months, and for contractual services suppliers and independent services suppliers up to 36 months;
- Abolish completely the market needs test; if a company needs foreign specialists, this is usually an objective requirement; if a company may solve its business issues with local staff, it will employ locals without being mandated by the law;
- Adopt a temporary or transitory license/authorization regime for providers of professional services (accounting, audit, engineering, architecture services) to allow them starting projects and practice for a limited period of time before their Moldovan license is issued;
- Promote establishing of partnerships between Moldovan and European universities and vocational schools, with the goal of increasing quality and relevance of Moldovan education system;
- Start negotiations with the priority EU countries regarding recognition of the Moldovan licenses and qualifications;
- Further reduce the costs and number of procedures necessary to register a company and resolve the insolvency;
- Review the current provisions of the Civil Code regarding legal treatment of branches and representations as of not having distinct legal personality.

Accounting and audit, legal services, engineering and architecture:

- Adopt a more liberal policy regarding the commercial presence;
- Explicitly allow partnerships as possible legal forms of establishing a business;
- Review the objective necessity of nationality requirement for practicing the legal services of court representation;

Construction services:

- Streamline the construction authorization process and reduce the number of related official procedures and costs;

Financial services:

- Alleviate the interdiction regarding the activity of branches of foreign financial institutions with reputation and from trustable jurisdictions, while at the same time maintaining interdictions regarding branches of financial institutions from risky jurisdictions;

Transport services:

- Ensure transparent privatization of the “Air Moldova” state-owned company, that has been planned for the year 2017;
- Ensure vertical separation and separate accounting of distinct services at the “Calea Ferata din Moldova” state company and define policy to offer private carriers access to infrastructure under predictable and economically reasonable conditions;
- Create a functional and independent regulator of the rail transport services market;

Logistics services:

- Review the objective necessity of maintaining state-owned companies providing customs clearance services;
- Review the objective necessity of maintaining the licensing requirement for the customs brokerage services;

Distribution services:

- Effectively dismantle the anti-competitive market agreements by enhancing the economic, legal and financial intelligence capacities of the Competition Council;
- Adopt more dissuasive and credible set of sanctions for breaching competition law provisions in the area of distribution services;

Telecommunication services:

- Conduct transparent privatization of the state-owned company “Moldtelecom” that has been planned for the year 2017;
- Effectively mandate access to and co-sharing of the critical infrastructure for all operators on the market;

Courier and postal services:

- Require accounting separation and enforce an appropriate cost allocation system at the state-owned company “Posta Moldovei”;
- Define clear and transparent rules for fair subsidization and tax treatment of the postal operators;
- Define universal service package and assign contracts to the designated postal operators on competitive bases;

Computer services:

- Review the objective necessity of maintaining state-owned companies providing computer services.

The results of this paper make a compelling case for further liberalization of the trade in services and improving the market competition. Except the incumbent companies, other companies and sectors will lose little or will even gain, while benefits will trickle down the whole economic system through increased efficiency and relocation of productive capacities to the most competitive sectors.

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Annexes

Annex 1. Overall level of Services Trade Restrictiveness Index in counties members of the EU and OECD

	Cargo-handl.	Storage and wareh.	Freight forw	Customs brok	Accoun.	Arch.	Engin.	Legal	Telecom	Air trans.	Road trans.	Rail trans.	Courier	Distr.	Com. bank.	Insur.	Comp.	Constr.
Austria	0.16	0.16	0.12	0.15	0.32	0.29	0.31	0.39	0.14	0.36	0.19	0.17	0.16	0.14	0.20	0.21	0.26	0.21
Belgium	0.13	0.12	0.07	0.09	0.38	0.24	0.13	0.22	0.14	0.36	0.12	0.10	0.14	0.08	0.13	0.12	0.18	0.18
Czech Republic	0.17	0.15	0.12	0.15	0.28	0.25	0.25	0.28	0.19	0.37	0.13	0.14	0.16	0.05	0.17	0.16	0.19	0.15
Denmark	0.13	0.11	0.07	0.08	0.19	0.10	0.08	0.26	0.08	0.37	0.13	0.12	0.14	0.10	0.15	0.21	0.12	0.12
Estonia	0.15	0.12	0.08	0.12	0.15	0.34	0.14	0.44	0.14	0.38	0.16	0.11	0.13	0.09	0.12	0.05	0.18	0.14
Finland	0.20	0.16	0.12	0.15	0.29	0.18	0.18	0.16	0.17	0.41	0.19	0.15	0.16	0.23	0.18	0.25	0.23	0.23
France	0.13	0.10	0.06	0.07	0.50	0.13	0.08	0.40	0.10	0.35	0.19	0.14	0.12	0.11	0.10	0.10	0.09	0.09
Germany	0.18	0.16	0.12	0.14	0.18	0.20	0.23	0.25	0.16	0.36	0.17	0.22	0.15	0.09	0.15	0.15	0.17	0.12
Greece	0.19	0.15	0.11	0.13	0.31	0.19	0.19	0.45	0.14	0.36	0.15	0.19	0.11	0.15	0.12	0.16	0.22	0.18
Hungary	0.11	0.12	0.06	0.07	0.15	0.14	0.14	0.83	0.11	0.34	0.11	0.07	0.13	0.04	0.08	0.18	0.11	0.10
Ireland	0.18	0.16	0.11	0.13	0.15	0.17	0.13	0.16	0.10	0.36	0.14	0.15	0.13	0.13	0.13	0.12	0.15	0.15
Italy	0.20	0.17	0.13	0.17	0.26	0.25	0.28	0.20	0.15	0.36	0.18	0.16	0.18	0.14	0.14	0.18	0.23	0.20
Latvia	0.12	0.09	0.08	0.09	0.10	0.10	0.10	0.09	0.11	0.37	0.09	0.15	0.13	0.08	0.11	0.19	0.11	0.12
Luxembourg	0.15	0.13	0.11	0.13	0.19	0.20	0.20	1.00	0.12	0.39	0.10	0.15	0.14	0.14	0.12	0.12	0.19	0.16
Netherlands	0.12	0.12	0.07	0.09	0.13	0.09	0.09	0.15	0.13	0.35	0.13	0.09	0.10	0.12	0.13	0.06	0.11	0.11
Poland	0.18	0.14	0.11	0.13	0.29	0.42	0.41	1.00	0.18	0.38	0.14	0.14	0.13	0.10	0.16	0.14	0.16	0.19
Portugal	0.16	0.12	0.10	0.10	0.48	0.24	0.20	0.27	0.10	0.39	0.14	0.11	0.12	0.12	0.14	0.20	0.16	0.18
Slovak Republic	0.17	0.18	0.13	0.15	0.28	0.45	0.48	0.50	0.12	0.35	0.15	0.13	0.15	0.07	0.12	0.17	0.18	0.19
Slovenia	0.23	0.23	0.08	0.10	0.19	0.38	0.38	0.45	0.17	0.37	0.13	0.07	0.09	0.10	0.13	0.12	0.16	0.19
Spain	0.19	0.17	0.14	0.16	0.30	0.26	0.29	0.30	0.19	0.39	0.15	0.15	0.19	0.07	0.10	0.17	0.19	0.17
Sweden	0.16	0.13	0.09	0.11	0.31	0.15	0.15	0.16	0.14	0.40	0.17	0.15	0.20	0.13	0.11	0.13	0.19	0.21
United Kingdom	0.15	0.13	0.09	0.11	0.28	0.20	0.15	0.16	0.16	0.34	0.15	0.12	0.15	0.09	0.11	0.16	0.18	0.13

Source: downloaded from the OECD statistical database, <http://stats.oecd.org/Index.aspx?DataSetCode=STRI>